

What Is Claimed Is:

1. An iron-based casting alloy, comprising:
an iron matrix having primary carbides (MC) selected
from the group consisting of vanadium carbides, niobium
5 carbides, titanium carbides, and combinations thereof
with substantially no eutectic carbides thereof; and
eutectic chromium carbides (M_7C_3) that form with
substantially no primary chromium carbides.

2. An alloy as in claim 1 further including
10 proeutectic austenite.

3. A process for making an iron-based
casting alloy, comprising: precipitating in an iron
matrix primary carbides (MC) of the group consisting of
vanadium carbides, niobium carbides, titanium carbides,
15 and combinations thereof; forming eutectic chromium
carbides (M_7C_3) and eutectic austenite without forming
any substantial amount of primary chromium carbides.

4. A process as in claim 3 wherein
proeutectic austenite is precipitated before forming the
20 eutectic chromium carbides and eutectic austenite.